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FACSIMILE TRANSMITTAL SHEET

TO. Examiner Echelmeyer	FROM: Gary Newson
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RE. Proposed agenda for teleconference	APPLICATION SERIAL NUMBER: 10/539,831

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS.

Examiner Echelmeyer,

Thank you for providing us an opportunity to speak with you regarding the pending office action. We would like to discuss an amendment to claim 18 that incorporates the limitations of claim 5 and the addition of several new claims directed towards particular compositions for the electrolytes. We would also like to discuss the limitations of independent claims 2, 5, and 18 as they related to the cited art. Attached are proposed amendments to the claims as an example of what we are proposing.

We look forward to speaking with you on June 15, 2010 at 2:00 pm EDT.

Regards,

Gary W. Newson

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18. (Currently Amended) A solid oxide fuel cell stack comprising:

a) an electrically conductive support plate comprising a porous metal foam matrix sheet; and[[,]]

[[(]]b) a plurality of tubular solid oxide fuel cell sub-stacks arranged side-by-side on the support plate, wherein each fuel cell sub-stack:

comprises at least ~~one~~ two fuel cells comprising: ~~having concentric inner and outer electrode layers sandwiching a concentric electrolyte layer; and~~

a first inner tubular solid oxide fuel cell comprising concentric inner and outer electrode layers sandwiching a concentric electrolyte layer; and

a first outer tubular solid oxide fuel cell inside which the first inner fuel cell is located, the first outer fuel cell comprising a pair of concentric inner and outer electrode layers sandwiching a concentric electrolyte layer; and

is electrically interconnected to the support plate,

wherein:

the electrolyte layer of the first inner tubular solid oxide fuel cell has a different composition and optimal operating temperature range than the electrolyte layer of the first outer tubular solid oxide fuel cell; and

the inner electrode of the first inner tubular solid oxide fuel cell and outer electrode of the first outer tubular solid oxide fuel cell being one of an anode and cathode, and the outer electrode of the first inner tubular solid oxide fuel cell and the inner electrode of the first outer tubular solid oxide fuel cell being the other of the anode and cathode.

38 (New) A solid oxide fuel cell stack as claimed in claim 2 wherein the electrolyte layer of at least one of the inner or middle fuel cells has a different composition and a higher optimal operating temperature range than the electrolyte layer of the outer fuel cell.

39 (New) A solid oxide fuel cell stack as claimed in claim 2 wherein the inner fuel cell has a Y2O3-doped ZrO2 electrolyte, and the middle and outer fuel cells have a Sc2O3-doped ZrO2 electrolyte.

40 (New) A solid oxide fuel cell stack as claimed in claim 2 wherein the inner and middle fuel cells have a Y2O3-doped ZrO2 electrolyte, and the outer fuel cell has a Sc2O3-doped ZrO2 electrolyte.

41 (New) A solid oxide fuel cell stack as claimed in claim 2 wherein the inner and middle fuel cells have a Y2O3-doped ZrO2 electrolyte, and the outer fuel cell has a doped-CeO2 electrolyte.

42 (New) A solid oxide fuel cell stack as claimed in claim 2 wherein the inner fuel cell has a Y2O3-doped ZrO2 electrolyte, and the middle and outer fuel cells have a doped-CeO2 electrolyte.

43 (New) A solid oxide fuel cell stack as claimed in claim 5 wherein the electrolyte layer of the first inner fuel cell has a different composition and a higher optimal operating temperature range than the electrolyte layer of the first outer fuel cell.